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Impact of DAIRY COOPERATIVES on Federal Order Milk Markets

by Donald R. Davidson

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Joseph G. Knapp, Administrator

The Farmer Cooperative Service conducts research studies and service activities of assistance to farmers in connection with cooperatives engaged in marketing farm products, purchasing farm supplies, and supplying business services. The work of the Service relates to problems of management, organization, policies, merchandising, product quality, costs, efficiency, financing, and membership.

The Service publishes the results of such studies; confers and advises with officials of farmer cooperatives; and works with educational agencies, cooperatives, and others in the dissemination of information relating to cooperative principles and practices.

This study was conducted under authority of the Agricultural Marketing Act of 1946 (RMA, Title II).

Farmer Cooperative Service is indebted to the offices of the 38 Market Administrators for information provided for this report and to the staff members of the Milk Marketing Orders Division, Agricultural Marketing Service, for their helpful suggestions as to content of the manuscript.

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Highlights

How significant is the role played by dairy cooperatives within Federal milk order markets, where nearly half the Nation's milk is sold?

To answer this and other questions, Farmer Cooperative Service, with the cooperation of the Agricultural Marketing Service, studied the Nation's Federally regulated milk markets in 1961 to gather basic data on these farmer-owned organizations. Such data were heretofore unavailable on a nationwide basis. Some highlights of this study follow.

- Of the 45 billion pounds of milk sold in Federal order markets during 1960, dairy cooperatives accounted for 35 billion pounds or four-fifths of all milk sold, indicating the importance of cooperatives in the marketing structure.

- Major marketing functions included serving as order handlers for 40 percent of the 35 billion pounds and as bargaining agents for 60 percent.

- Order handling has necessitated more cooperative ownership and operation of plant and transportation facilities and has strengthened bargaining activities.

- As order handlers, dairy cooperatives performed one or more of five major types of marketing activities:

1. Receiving milk directly from producers at regulated supply plants.

2. Receiving milk directly from producers at regulated distribution plants.

3. Receiving milk directly from producers at regulated supply-equilization plants.

4. Diverting milk directly from producers to unregulated or other regulated plants.

5. Transporting bulk tank milk directly from farms to regulated plants.

- Dairy cooperatives usually handled a larger proportion of milk in the big order markets because of the (1) proportion of reserve milk in such markets, and (2) average distance of producers from the market.

- Although most dairy cooperatives operated in only one Federal order marketing area, one of ten associations was found to have expanded marketing operations to include two or more order markets.

- Three-fourths of the cooperatives serving Federal order markets could be classed as small, having less than 300 members shipping to these markets.

- Dairy cooperatives represented 80 percent of all producers shipping milk to order markets.

- Cooperatives have been instrumental in easing the changeover from can to bulk handling in order markets where, at the time of the study, more than 70 percent of the milk shipped in most regions was bulk tank milk.

Impact of Dairy Cooperatives on Federal Order Milk Markets

By Donald R. Davidson
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Federal milk orders -- now more than 80 of them altogether -- cover some 190,000 dairymen, regulate almost half of the milk sold annually by dairy farmers to plants and dealers in the United States, and affect markets containing nearly three-fourths of the urban population of our country.

The need for these Federal orders grew out of the depression of the early 30's when most major milk markets became completely disorganized. In this period of low prices, unrest, and strikes, the orderly flow of milk was disrupted. State attempts at milk control tended to break down because of the large amount of milk moving in interstate commerce.

Many milk producers and distributors saw the underlying need for Federal regulation and sought Government aid for two basic reasons -- (1) to promote and maintain orderly milk marketing conditions for farmers, and (2) to assure consumers of an adequate supply of pure, wholesome milk.

A publication of the Department of Agriculture states, "Although

there is no suggestion in the Agricultural Marketing Agreement Act [of 1937] that milk orders be made available only to markets in which producers are organized, the objectives and machinery of the program are such that the orderly and systematic representation of producers which a marketing cooperative provides is essential for effective operation."

Dairy cooperatives have been largely responsible in initiating action for obtaining orders and seeing that they work effectively. As the principal representative of the dairy farmer, cooperatives analyze the effect of orders, study changing market conditions, present evidence at public hearings, and propose amendments to accommodate the widening scope of their marketing activities. In this area, cooperatives perform some of their most useful marketing services.¹

To gain a better understanding of the role currently taken by farmer-owned dairy organizations operating in Federally regulated marketing areas, Farmer Cooperative Service (FCS) in 1961 obtained information

¹ Co-op Role in Federal Milk Orders--25 Years of Public Service, News for Farmer Cooperatives, Farmer Cooperative Service. U. S. Dept. of Agr. July 1959, p. 5.

from market administrators concerning all dairy cooperatives in the 80 Federal order markets existing at that time.

This resulting report is part of a larger continuing study of pool-

ing practices used by dairy cooperatives conducted by FCS in cooperation with the Agricultural Marketing Service and the Economic Research Service of the U.S. Department of Agriculture.

Plans for Study

FCS assembled data in this report as a preliminary step in its study of different pooling practices and methods used by dairy cooperatives. Such data on the number, size, membership, and marketing functions of these associations serving Federal order markets had not previously been compiled on an individual market, regional, and nationwide basis.

Objectives and Procedures

The major intent of this study was to pinpoint cooperative structure of Federal order markets and determine the kind of marketing functions and scope of operations performed by dairy cooperatives serving these markets. Findings published in this report will be useful to people working in the milk marketing industry, to State and Federal researchers concerned with dairy marketing problems, and to economists and marketing specialists associated with the Federal order program.

Information obtained from this study on the marketing role and position of dairy cooperatives operating under Federal order regulations will also provide benchmarks necessary to planning the next phase of this study dealing with pooling problems faced by cooperatives

selling milk in regulated and unregulated marketing areas.²

FCS sent mail questionnaires to all market administrators in March 1961, requesting information on (1) number of member-producers belonging to each cooperative in the respective orders, (2) volume of milk supplied by these producers, (3) number of nonmember producers and volume of milk they shipped to each order market, (4) types of functions performed by cooperatives as handlers, (5) volume of bulk and can milk handled in various functions, and (6) total volume of bulk and can milk pooled in each order market.

All market administrators responded with the requested information, covering a 4-month period—February, May, August, and November, 1960 -- for the 80 Federal orders in effect at that time. This publication reports on the statistical data submitted with brief comments on significant findings.

Scope of Study

Figure 1 shows the geographic location and size of Federal milk

²How Mid-South Dairy Co-op Repools Returns, News for Farmer Cooperatives, Farmer Cooperative Service, U. S. Dept. of Agr. Aug. 1961, p. 9.



Many dairy cooperatives operating in Federal order markets have recently acquired plant facilities and become order handlers. Kyana Milk Producers' new supply-equalization plant at Louisville, Ky., manufactures reserve milk not needed for Class I use in the Louisville-Lexington-Evansville order market.

marketing areas supplying information for this report. Data for February and May included 79 markets and for August and November, 80 markets, since the Suburban St. Louis Order became effective June 1, 1960.

Census data for 1960 showed nearly 90 million people residing in the 80 Federal milk order marketing areas that were effective in November of that year. This figure represents a little over half of the total population and nearly three-fourths of the urban population of the continental United States.

Nearly three-fourths of the Federal order markets were located in the Central regions of the United States, with three of five of these in the North Central region. Of the remaining 27 percent of the markets, 20 percent were in the New England and Atlantic regions and 7 percent in the Mountain and Pacific regions.

Table 1 shows the average monthly volume of milk sold by dairy farmers during 1960, comparing the scope of Federal order operations with those in nonregulated marketing areas. On a regional basis, a wide range existed in the percentage of milk that farmers shipped to plants regulated under Federal orders and to plants operating in unregulated marketing areas. For example, in the New England and Middle Atlantic regions, over 75 percent of the milk shipped by producers went to regulated plants, as compared with only 16 percent in the Mountain States and the Pacific States.

Although the West North Central sector had the largest number of Federal order markets, 19, less than one-fourth of the milk in this region went to regulated pool plants. The principal reason for this situation was the large volume of manufacturing grade milk that was being produced in this part of the country.

Table 1.—*Volume and percentage of milk sold by dairy farmers to plants regulated under Federal order markets, and to unregulated plants, and with totals by regions, monthly average, 1960*

| Region | Volume of milk shipped to plants | | | Percent of total shipped by type of plant | |
|--------------------|----------------------------------|---------------------------|-------|---|-------------|
| | Regulated ^{1/} | Unregulated ^{2/} | Total | Regulated | Unregulated |
| | Mil. lb. | | | | |
| New England | 279 | 72 | 351 | 80 | 20 |
| Middle Atlantic | 1,068 | 350 | 1,418 | 75 | 25 |
| South Atlantic | 202 | 391 | 593 | 34 | 66 |
| East North Central | 1,244 | 1,502 | 2,746 | 45 | 55 |
| West North Central | 323 | 1,198 | 1,521 | 21 | 79 |
| East South Central | 173 | 268 | 441 | 39 | 61 |
| West South Central | 260 | 148 | 408 | 64 | 36 |
| Mountain | 84 | 239 | 323 | 26 | 74 |
| Pacific | 102 | 726 | 828 | 12 | 88 |
| United States | 3,735 | 4,894 | 8,629 | 43 | 57 |

^{1/} Compiled from data in FMOS-20, "Federal Milk Order Market Statistics," Agricultural Marketing Service, U. S. Dept. of Agr.

^{2/} Compiled from data in "Milk Production, Disposition, and Income, 1959-60," Statistical Reporting Service, U. S. Dept. of Agr.

Status of Dairy Cooperatives

Dairy cooperatives operating in Federal order markets varied widely in number, size, and density of distribution.

Number of Cooperatives

According to market administrators' records, during 4 selected months in 1960 an average number of 409 cooperatives were operating in all Federal order markets. However, adjustment for double counting of several organizations because of their marketing operations in more than one area resulted in an average of 342 actual dairy cooperatives marketing milk in Federal order markets during this period (table 2).

By Region

Little relationship existed between the number of Federal order

markets in a region and the number of cooperatives supplying these markets. The Middle Atlantic region had only two order markets but had the largest number of cooperatives selling milk in any region in the country.

The large size of these two middle Atlantic markets—Philadelphia, and New York-New Jersey—was a major factor in the number of associations serving them. Rated as the largest in the United States, the New York-New Jersey market contained a fourth of all milk pooled in Federal order markets in 1960.³

³ How Dairy Co-ops Fare in Nation's Largest Milk Pool, News for Farmer Cooperatives, Farmer Cooperative Service, U. S. Dept. of Agr. Feb. 1962, p. 10.

Table 2.--Number of cooperatives serving Federal order markets
by regions for selected months, 1960

| Area | Number of Markets | Number of cooperatives serving markets | | | | |
|--------------------|----------------------|--|-----|--------|----------|--------------------|
| | | February | May | August | November | 4-month average |
| New England | 5 | 30 | 29 | 29 | 27 | 29 |
| Middle Atlantic | 2 | 135 | 138 | 139 | 139 | 138 |
| South Atlantic | 9 | 21 | 22 | 25 | 25 | 23 |
| East North Central | 18 | 59 | 57 | 56 | 56 | 57 |
| West North Central | 19 | 45 | 44 | 46 | 47 | 45 |
| East South Central | 9 | 13 | 12 | 12 | 12 | 12 |
| West South Central | 12 | 15 | 15 | 15 | 14 | 15 |
| Mountain | 4 | 10 | 10 | 9 | 10 | 10 |
| Pacific | 2 | 13 | 13 | 13 | 12 | 13 |
| Total | 80 | 341 | 340 | 344 | 342 | 342 |

A larger number of cooperatives appeared in Federal order markets during August and November than in the preceding February and May. This was attributed to some organizations' expanding their activities into other markets and to an additional market which became effective in June.

By Size of Marketing Area

Appendix table 1 indicates that the average number of dairy cooperatives per market increased with the size of the market. Thus, cooperatives averaged from 1 association in small order markets to 22 in the largest, with the median value for all marketing areas being 2 associations for each market.

The number of cooperatives serving a market ranged from 1 association in 24 markets to 133 in the New York-New Jersey order market. However, by omitting this largest market from the tabulation, the range in number of cooperatives operating in individual markets was reduced greatly--from 1 to 23 organizations.

Based on population, most Federal orders had medium to large mar-

keting areas, as appendix table 1 indicates. Medium-sized marketing areas were scattered mainly through the South Atlantic and the Central States; large markets -- with 1-million-and-over population -- were in the New England, Atlantic, and East North Central regions. Small markets were located in the Central and Mountain regions, with two in three of them in the West North Central area.

In Multimarket Operations

Nearly 90 percent of all cooperatives selling milk in Federal order markets did so in only one market (table 3). However, some associations extended their marketing activities to include more than one order market.

An average of 38 associations had multiorder operations, with more than half of these being in only 2 markets. Twelve cooperatives marketed members' milk in three to four Federal order markets; three associations, in five order markets; and one association, in six order markets.⁴

⁴How a North Texas Dairy Co-op Operates in Five Markets, News for Farmer Cooperatives, Farmer Cooperative Service, U. S. Dept. of Agr. Feb. 1961, p. 6.

Table 3. — *Dairy cooperatives in Federal order markets
classified by number of markets served, for selected months, 1960*

| Federal order markets served | Number of cooperatives by months | | | | |
|---------------------------------|----------------------------------|----------|----------|----------|--------------------|
| | February | May | August | November | 4-month average |
| <u>Number</u> | | | | | |
| 1 | 306 | 305 | 304 | 301 | 304 |
| 2 | 19 | 19 | 25 | 26 | 22 |
| 3 | 7 | 7 | 5 | 5 | 6 |
| 4 | 6 | 6 | 6 | 5 | 6 |
| 5 | 2 | 2 | 3 | 4 | 3 |
| 6 | <u>1</u> | <u>1</u> | <u>1</u> | <u>1</u> | <u>1</u> |
| Total | 341 | 340 | 344 | 342 | 342 |

By tabulating these multimarket operations on a regional basis, FCS found that the East North Central region contained the largest number of cooperatives with intermarket activities. All regions but one, as table 4 indicates, listed associations that were marketing members' milk in more than one Federal order market. This expansion by cooperatives into additional order markets may indicate the need for a

closer alignment in the provisions of some Federal order markets.

Some associations had assumed multimarket operations, within given regions; a few had extended marketing activities beyond regional boundaries into markets in other parts of the country. By November 1960, 12 associations were engaging in such interregional marketing in contiguous regions, with two of every

Table 4. — *Number of cooperatives operating in more than one Federal order market, for selected months, by regions, 1960*

| Item | Number of cooperatives by months | | | | |
|---------------------------------|----------------------------------|-----|--------|----------|--------------------|
| | February | May | August | November | 4-month average |
| Number of cooperatives (total) | 35 | 35 | 40 | 41 | 38 |
| By regions ¹ : | | | | | |
| New England | 4 | 4 | 4 | 5 | 4 |
| Middle Atlantic | 3 | 3 | 3 | 3 | 3 |
| South Atlantic | 5 | 5 | 5 | 5 | 5 |
| East North Central ² | 11 | 11 | 15 | 15 | 13 |
| West North Central | 7 | 7 | 11 | 11 | 9 |
| East South Central | 4 | 4 | 5 | 5 | 4 |
| West South Central | 6 | 6 | 7 | 7 | 6 |
| Mountain | 2 | 2 | 2 | 2 | 2 |
| Pacific | 0 | 0 | 0 | 0 | 0 |

¹Number of cooperatives by regions exceeds total number of cooperative because several cooperatives had interregional marketing activities.

²The suburban St. Louis market within this region became effective June 1, 1960.

three of the 12 selling milk between adjacent regions in the Central States. Four cooperatives marketed members' milk in West North Central and West South Central Federal order markets (appendix table 2).

Size of Cooperatives

Turning from the number of associations in Federal order markets to a closer look at the size of these associations, FCS found most of them had less than 300 members serving these markets (table 5). A total of 75 percent fitted into this category, with over half of these small cooperatives having less than 100 members each.

Fourteen percent fell in the medium-size group, having from 300 to 900 members. Only 11 percent could be classified as large, listing 900 or more members.



Michigan Milk Producers Association sells milk in several Federal order markets. A 60,000-pound load destined for a dairy regulated under Southern Michigan Order No. 40 moves from the MMPA receiving station and standby surplus disposal plant at Imlay City, Mich.

Table 5. — *Dairy cooperatives serving Federal order markets classified by number of member-producers per cooperative, average of four selected months, 1960*

| Number of member-producers per cooperative | Number of cooperatives |
|--|------------------------|
| Small | |
| Less than 100 | 153 |
| 100 — 299 | 106 |
| Medium | |
| 300 — 499 | 27 |
| 500 — 699 | 11 |
| 700 — 899 | 9 |
| Large | |
| 900 — 1099 | 6 |
| 1100 and over | 30 |
| Total | 342 |

These data on number of members for each cooperative do not take into account an association's marketing activities unrelated to a Federal order market. Several associations, especially those located in the North Central States, had some members producing ungraded milk for manufacturing purposes.

In the New York-New Jersey market, especially, there were a large number of small bargaining-type organizations, with most of them belonging to one or the other of two federations of cooperatives. In addition to these two federations of cooperatives, there were two large nonfederation members associations that made up the "four qualified cooperatives" listed in the New York-New Jersey order as eligible for cooperative payments.

Altogether, there were 133 individual associations operating in this marketing area. They ranged in size from less than 50 members to more than 10,000 members. Small cooperatives greatly outnumbered the larger one.

Cooperatives as Order Handlers

Let us now consider the specific marketing functions performed by these associations in Federal milk order markets.

An increasing number of associations operating in Federal order markets have acquired plant facilities and become order handlers in recent years. Handlers under Federal orders are those who usually, in addition to participating in some phase of the physical handling of milk -- such as receiving, manufacturing, bottling, distributing -- are responsible for reporting receipts and utilization directly to the market administrator.

Appendix table 3 shows that cooperatives were the handlers for nearly a third of the milk sold in Federal order markets during 1960, while proprietary concerns handled the other two-thirds.

Variation among Markets

The percentage of milk marketed by cooperatives as order handlers varied widely among individual markets. It ranged from zero in nine markets to 99.5 percent in the Minneapolis-St. Paul Federal order. The median of all markets amounted to 19 percent.



Miami Valley Milk Producers Association is handler under the Dayton-Springfield Federal order market for milk received from producers at its supply-equalization plant. Shown are two tank trucks arriving at this plant. The truck in the rear came directly from producers' farms, while the truck in the foreground brought in milk not needed by an individual dairy.

Cooperatives handled 40 percent or more of the milk in 1 of 5 markets, as shown in the accompanying tabulation. They handled 20 percent or more of the milk in nearly half of all markets.

| Percent of milk handled by cooperative per market | Number of Federal order markets |
|---|---------------------------------|
| Less than 1 | 10 |
| 1 - 19.9 | 32 |
| 20 - 39.9 | 22 |
| 40 - 59.9 | 8 |
| 60 and over | 8 |
| Total markets | 80 |

Of the total milk handled by cooperatives, only a fraction--a little more than 1 percent--came from producers who were nonmembers. (Compiled from data in appendix table 3). Likewise, of the total milk handled by proprietary concerns, only 31 percent came from producers who were not members of cooperatives.

Cooperatives handled some nonmember milk in 15 markets. The largest percentage occurred in the Dayton-Springfield Federal order market, where 16 percent of the milk reported by cooperatives came from nonmembers. In the other 65 markets, proprietary organizations handled all nonmember milk.

Market Size and Volume Handled

Previous research by FCS has indicated a correlation between an association's plant or transportation facilities, or both, and its bargaining power in the market. The hypothesis proposed was that in Federal order markets where cooperatives were handlers for a significant proportion of the milk, the bargaining position

of member-farmers was more secure. Additional research and analysis would be necessary to prove or disprove that this relationship exists.

However, keeping in mind this hypothesis, FCS sought to determine if any relationship existed between size of Federal order markets and the percentage of milk handled by cooperatives. The accompanying tabulation, compiled from data in appendix table 3, indicates that associations in larger markets reported a greater percentage of milk as order handlers than those operating in smaller marketing areas.

| Volume of milk per market (Monthly) | Number of Federal order markets | Percent of milk handled by cooperatives (Median) |
|-------------------------------------|---------------------------------|--|
| <u>Million pounds</u> | | |
| Under 5 | 9 | 9 |
| 5 - 24.9 | 43 | 18 |
| 25 - 74.9 | 17 | 20 |
| 75 and over | 11 | 39 |
| Total or average | 80 | 19 |

Thus, carrying the original hypothesis a step farther, one might conclude that the larger the market, the stronger the bargaining position of member-farmers. As the tabulation shows, a direct relationship existed between the percentage of milk handled by cooperatives and the size of the markets within which they operated.

Cooperatives reported to market administrators as order handlers for only 9 percent of all milk pooled in the 9 smallest markets; whereas, they were handlers for nearly 40 percent of the milk pooled in the 11 largest markets. These 11 biggest



Two of the Nebraska-Iowa Non-Stock Co-operative Milk Association's large over-the-road tank trucks deliver milk to a dairy in Omaha. This milk came from the co-op's supply plant at Grand Island, Neb., 150 miles west of Omaha—where it was first received from producers—making the Nebraska-Iowa co-op the order handler for it under the Nebraska-Western Iowa Federal order milk marketing area.

markets accounted for about two-thirds of all milk pooled in the 80 Federal order markets.

Considering size of market by volume of milk pooled, the majority of order markets fell within the 5-to-25-million-pound range. Cooperatives in these markets were order handlers, on the average, for 18 percent of the milk receipts.

Reasons for Relationship

Why do cooperatives usually handle a larger percentage of milk as the size of the market increases? Two major reasons are apparent: (1) Proportion of reserve milk in market, and (2) average distance of producers from market.

(1) The tabulation on page 12 shows the relationship between re-

serve milk⁵ and market size. As markets became larger -- ranging in size from less than 5 million pounds to 75 million pounds and over -- the proportion of reserve milk increased from 19 percent to 33 percent.

Since many cooperatives in Federal order markets manufactured reserve milk as one of their important marketing services, it followed that cooperative handling of milk would be greater -- percentage-wise -- in larger markets containing a larger proportion of reserve milk.

(2) Cooperatives also have a vital role in the procurement, assembly, and movement of producers'

⁵ The term "reserve milk," as used here, refers to Class II and lower classes of milk.

| Volume of milk per market (monthly) | Number of Federal order markets | Percent of reserve milk (median) |
|---|--|--|
| <u>Million pounds</u> | | |
| Under 5 | 9 | 19 |
| 5 - 24.9 | 43 | 23 |
| 25 - 74.9 | 17 | 28 |
| 75 and over | <u>11</u> | <u>33</u> |
| Total or average | 80 | 25 |

milk to bottling and distributing plants. Since the proportion of directly shipped milk is usually less in larger markets -- with more milk being received through country receiving points, dairy marketing associations operating receiving stations handled a larger percentage of the pool's milk in these larger marketing areas.

Also, with the development of bulk handling methods and the bypassing of many can-receiving stations, a number of cooperatives in the larger markets have established bulk tank reloading stations.

In considering cooperatives as order handlers, this report has thus far discussed the variation among markets in percentage of milk handled by cooperatives, the correlation between market size and amount of milk handled by cooperatives, and reasons for this correlation. Up to now, different types of marketing functions have not been touched on. Yet these functions -- performed as order handlers -- figured significantly in the overall operations of these associations.

Number and Types of Marketing Functions

As mentioned earlier, the total number of cooperatives selling milk

in all Federal order markets for 4 selected months in 1960 averaged 409, when no adjustment had been made in the tabulation for double-counting.

However, when the multimarketing operations of several organizations were accounted for, the actual number of cooperatives operating in order markets for the same period averaged 342. Appendix table 4 shows these 342 associations classified as handlers (operating cooperatives) or as nonhandlers (strictly bargaining cooperatives). It designates the number engaged in different types of order handler functions on a market and a regional basis.

Slightly more than half of these cooperatives were order handlers for part or all of the milk they marketed. The others were purely bargaining associations. Altogether, cooperatives handled a little more than 40 percent of all the milk they marketed in Federal order markets (table 6 and appendix table 6).

About two-thirds of the cooperatives serving as order handlers performed only one type of marketing function. The other 61 cooperatives -- approximately a third of those engaged in handling -- performed two or more marketing functions.

Although one cooperative was engaged in five different functions, it was performing them in different markets. This was also the case for several associations performing combinations of the functions. A cooperative might receive milk directly from producers at one or more of its regulated supply plants in one market, divert milk for its account in another market, and receive members' milk in tank trucks

Table 6. — *Volume of milk handled by cooperatives in different functions as Federal order handlers, by regions, average of 4 selected months, 1960*

| Region | Volume of milk handled in different functions ¹ | | | | | |
|----------------------------|--|-----|-----|-----|----|-------|
| | I | II | III | IV | V | Total |
| | Million pounds | | | | | |
| New England | 71 | 13 | 8 | 2 | 0 | 92 |
| Middle Atlantic | 151 | 37 | 28 | 98 | 0 | 314 |
| South Atlantic | 10 | 21 | 19 | 2 | 0 | 52 |
| East North Central | 235 | 61 | 67 | 19 | 20 | 402 |
| West North Central | 105 | 19 | 23 | 21 | 25 | 193 |
| East South Central | 9 | 2 | 5 | 2 | 5 | 21 |
| West South Central | 12 | 10 | 16 | 10 | 25 | 73 |
| Mountain | 1 | 5 | 0 | 7 | 24 | 37 |
| Pacific | 22 | 20 | 0 | 1 | 0 | 43 |
| United States (80 markets) | 616 | 186 | 166 | 160 | 99 | 1,227 |

¹Roman numerals stand for functions: I—Received milk directly from producers at regulated supply plant(s). II—Received milk directly from producers at regulated distribution plants. III—Received milk directly from producers at regulated supply equalization plant(s). IV—Diverted milk directly from producers to nonregulated plant(s) or to regulated plant(s). V—Received bulk milk directly from producers in tank trucks and delivered it to regulated plant(s).

²Less than 0.5 million pounds.

under its control or ownership and deliver it to regulated bottling plants in the third market.

The five different types of marketing functions were:

1. Receiving milk directly from producers at regulated supply plants;
2. Receiving milk directly from producers at regulated distribution plants;
3. Receiving milk directly from producers at regulated supply-equalization plants;
4. Diverting milk directly from producers to unregulated or regulated plants;
5. Transporting bulk tank milk directly from farms to regulated plants.

Supply Plants

These plants qualified under a Federal order as such, by performing specified shipping requirements. Of the 176 cooperatives handling milk, 94 maintained regulated supply plants. Such supply plants existed in half of all order markets (See appendix table 4).

Many of these plants, besides functioning as strictly receiving depots, contained equipment for manufacturing surplus milk. This was especially the case for those supply plants operating under order markets in the North Central regions.⁶

⁶Davidson, D. R. How Manufacturing Co-ops Market Grade A Milk. Circular 26. Farmer Cooperative Service, U. S. Dept. of Agr. Oct. 1960.

Operating such supply plants turned out to be the chief marketing function performed, based not only on number of associations with such supply plants, but also on the volume of milk received at these plants -- 50 percent of the 15 billion pounds of milk handled by these associations in 1960.

Distribution Plants

These plants qualified under a Federal order as distribution plants, by performing specified distributing requirements. A total of 66 cooperatives operated regulated distribution plants in nearly half of all order markets. Although these plants were nearly as widespread as the supply

plants, they processed only 15 percent of the milk handled by cooperatives.

Diversion of Milk

Based on the number of associations performing the function, diversion of milk from producers to unregulated or regulated plants ranked third in order of importance. Cooperatives diverted milk in more than half of all order markets in 1960, totaling 13 percent of milk handled.

Performing this service for bottlers and distributors in the market, 55 associations diverted milk -- for their account -- to regulated or non-pool plants to be manufactured. Associations not operating their own



Receiving milk directly from producers at regulated distribution plants was one of five major types of marketing functions cooperatives performed as order handlers. Consolidated Badger Cooperative was the handler, under the Northeastern Wisconsin Federal order, for milk received at its distribution plant at West De Pere, Wis. Here is a truck pulling out from this plant to serve customers with "Morning Glory" dairy products.

manufacturing facilities usually employed this means of marketing milk not wanted by Class I buyers.

This diversion of milk is the only one of the five marketing functions usually not involving physical handling of the milk by the association, although the association is considered the order handler. Thus a strictly bargaining association may divert milk for its account when operating in certain Federal order markets and be considered a handler for this milk.

Supply-Equalization Plants⁷

The supply-equalization plants qualified under a Federal order as such, by the association's performing certain marketing requirements.

Rating fourth, on the basis of 37 cooperatives performing this function, was the receiving of milk directly from producers at regulated supply-equalization plants. Some associations operating these types of regulated plants referred to them as "surplus-manufacturing plants."

In any case, the primary function of the supply-equalization plants was to provide a market outlet for milk not needed in Class I uses. In all regions but two -- Mountain and Pacific -- cooperatives were providing this marketing service, covering nearly a third of the order markets. Volumewise, cooperatives handled 14 percent of their milk at regulated supply-equalization plants.

Tank Trucks

Last and least of the marketing functions was the receipt of bulk milk in tank trucks directly from producers and delivery of it to regulated plants. This milk represented 8 percent of the total handled.

In 1960, a total of 17 cooperatives provided this service to 10 markets in the Central and Mountain States. Market administrators' records indicated that no cooperative performed this function "as a handler" for any market in the New England, Atlantic, and Pacific regions.

This meant that, although some cooperatives in these areas received members' bulk milk in tank trucks and hauled it to regulated distributing plants, most of the Federal order markets in these regions did not contain provisions whereby a cooperative could become the handler for milk it marketed in this fashion. Even in those markets where it was allowed, if any association performed this function of bulk milk hauling, it did not elect to become the handler for the milk so hauled.

Although cooperative hauling of bulk milk accounted for a relatively small proportion of total milk handled in 1960, its importance should increase greatly within from 5 to 7 years as additional supply plants are by-passed, and most markets approach 100 percent in bulk milk deliveries.

Proportion of Bulk and Can

In all regions except two -- New England and Middle Atlantic -- more than 70 percent of the milk shipped was bulk tank milk (appendix table 5). In these two areas, can milk shipments still predominated, with about

⁷ The term "supply-equalization plant" as used in this report describes the type of regulated pool plant usually referred to in Federal order documents as "cooperative association plant."



A tank truck belonging to Twin City Milk Producers Association prepares to load milk from a member's farm. Twin City was the order handler for this milk, which was hauled directly to bottling plants regulated under Minneapolis-St. Paul Federal Order No. 68.

two-thirds of the milk coming to market in this form.

With one exception -- the South Atlantic region -- milk handled by dairy cooperatives in Federal order markets contained a higher percentage of can shipments than total milk shipped to these markets. For example, in the New England area, milk shipped in cans amounted to about 40 percent of all milk supplied to Federal order markets. In these same markets, however, more than 60 percent of the milk handled by cooperatives was can milk.

Cooperatives have helped to make the changeover from can to bulk milk shipments as orderly and efficient as possible. Conversion to

bulk handling methods has been rapid in several markets. In many cases cooperatives provided the only outlet for producers of can milk -- furnishing them with a market until they were financially able to make the switch to bulk.

Thus, cooperatives have softened dislocations of this change by providing a market for both member and nonmember can producers, and at the same time have helped to stabilize market supply. At best, however, this has been only an interim measure. Many of these cooperatives have had to limit the time they would accept can shipments, because of the low volume and high cost involved in operating such can receiving intakes.

Comparison of Member and Nonmember Producers

The number of producers within given Federal milk order markets ranged all the way from 103 to 49,065, with a median of 925 shippers in a market. The median is the most representative average in this case where such a wide variation exists.

Two regions -- East North Central and Middle Atlantic -- claimed the heaviest concentration of dairy farmers serving Federal order markets. Table 7 indicates that more than 60 percent of the total number of 189,913 producers supplying Federally regulated marketing areas were located in these two areas. In comparison, the lightest concentration -- less than 3 percent -- was found in the Mountain and Pacific States.

Producers supplying these markets were either (1) organized producers--members of a dairy cooperative--or (2) "independent" producers--not belonging to any

such organization and referred to in these markets as nonmembers.

Cooperative Majority

Table 7 shows that the preponderance of producers shipping to Federal order markets belonged to dairy cooperatives. During the 4 selected months in 1960, 4 of every 5 dairymen shipping milk to the 80 Federal order markets were members of cooperatives.

Data based on individual markets showed the percentage of producer-members ranged from less than 50 percent in one market to 100 percent in four markets--with a median of 88 percent for all markets.

As shown in the next tabulation, nearly two of three markets had from 79 to 98.9 percent producers who belonged to dairy cooperatives.

Table 7. -- *Number and percentage of cooperative and nonmember producers supplying Federal order markets, by regions, average of 4 selected months, 1960*

| Region | Number of producers | | | Percent of total | |
|----------------------------|---------------------|------------|---------|------------------|------------|
| | Co-op members | Nonmembers | Total | Co-op members | Nonmembers |
| New England | 13,950 | 3,201 | 17,151 | 81 | 19 |
| Middle Atlantic | 37,791 | 18,542 | 56,333 | 67 | 33 |
| South Atlantic | 7,507 | 1,683 | 9,190 | 82 | 18 |
| East North Central | 52,136 | 9,341 | 61,477 | 85 | 15 |
| West North Central | 17,978 | 1,490 | 19,468 | 92 | 8 |
| East South Central | 7,112 | 1,108 | 8,220 | 86 | 14 |
| West South Central | 9,584 | 2,195 | 11,779 | 81 | 19 |
| Mountain | 2,059 | 197 | 2,256 | 91 | 9 |
| Pacific | 2,952 | 1,087 | 4,039 | 73 | 27 |
| United States (80 markets) | 151,069 | 38,844 | 189,913 | 80 | 20 |

| Cooperative members per market | Federal order markets |
|-----------------------------------|--------------------------|
| <u>Percent</u> | <u>Number</u> |
| Fewer than 69 | 8 |
| 69 - 78.9 | 13 |
| 79 - 88.9 | 20 |
| 89 - 98.9 | 32 |
| 99 and over | 7 |
| Total markets | 80 |

In Relation to Market Size

Smaller order markets had a greater proportion of member-producers than larger markets, indicating a slight inverse relationship between size of market and percentage of producers belonging to cooperatives.

The accompanying tabulation shows that in about half of all markets there were 1,000 or more producers, with cooperative members making up an average of 87 percent of the shippers. In the medium-size markets (between 400 and 999 shippers), member-producers averaged 88 percent. In the smallest markets (less than 400), however, cooperative members represented a median of 92 percent of all dairymen.

| Producers per market | Federal order markets | Member- producers (median) |
|-------------------------|-----------------------------|----------------------------------|
| <u>Number</u> | | <u>Percent</u> |
| Less than 400 | 20 | 92 |
| 400 - 999 | 24 | 88 |
| 1,000 and over | 36 | 87 |
| Total or average | 80 | 88 |

In Relation to Region

More than half the member-producers serving Federal order markets were located in two regions--the East North Central and the Middle Atlantic. The largest concentration of cooperative members, more than a third of those supplying Federal order markets, centered in the East North Central region alone (table 7).

Nonmembers comprised 33 percent of the producers shipping to order markets in the Middle Atlantic States but less than 10 percent of those in the West North Central region. Almost one producer in three supplying the New York-New Jersey and Philadelphia markets was a nonmember, compared to less than 1 in 10 of those supplying the 19 markets in the West North Central region.



Eighty percent of all producers shipping milk to Federal order markets were members of dairy cooperatives. The other 20 percent were "independent" producers referred to in these markets as nonmembers.

Comparison of Daily Output

Changing the basis of analysis from number of cooperative members and nonmembers to volume of milk shipped by these producers provides a more complete picture of the position of association members in markets under Federal milk orders.

Aggregate Basis

Based on average daily shipments to all order markets, as shown in appendix table 6, nonmembers' daily production exceeded that of members by about 2 gallons (17 pounds) of milk. Such a small difference in daily output--about 3 percent--would seem to indicate that size of milking operations for both members and nonmembers supplying Federal order markets was similar.

This finding is corroborated by comparing table 7 and appendix table 6, where one finds that the proportion of members in all federally regulated markets was only slightly greater than the percentage of milk they supplied these markets. Conversely, the milk shipments of nonmembers were only 1 percent greater than their number.

Individual Market Basis

When looking at individual markets, however, one finds the daily output of member and nonmember producers did vary greatly in several cases. In 76 markets, where milk was supplied by both organized and independent producers--all milk was shipped by cooperative members in 4 markets--daily production of nonmembers averaged higher than that of association members in 50 of these markets. In 25 markets,

cooperative producers were bigger, and in 1 market both types averaged the same.

In the 50 markets where nonmembers were outshipping cooperative members on an average daily volume per producer basis--nearly 2 in every 3 of the 76 mentioned above--nonmembers averaged (based on the median) 18 percent larger daily shipments than association members.

Comparing these markets to the 25 where cooperative members exceeded nonmembers in average daily output per shipper, we found a similar difference in size of the two types of producers. In the latter group of markets, association producers averaged (based on the median) 15 percent more in daily production per shipper than nonmembers.

All 76 markets showed a median value of 17 percent as the difference in members' and nonmembers' average daily output. This median represents a wide range. In six markets, for example, members and nonmembers were both averaging about the same in daily shipments--with a difference of less than 1 percent; but in six other markets they differed quite widely in their daily production--more than 200 percent.

Average daily output of member and nonmember producers was more nearly comparable in large than in small markets. As shown in the tabulation on page 20, in the large markets average daily milk shipments from members and nonmember producers differed only 13 percent in volume, as compared with 17 percent in the medium, and 24 percent in the small markets.

| Volume of milk | Federal order markets | Difference in members' and nonmembers' average daily output |
|----------------------|-----------------------|---|
| Million pounds | Number | Percent |
| (Small) less than 10 | 15 | 24 |
| (Medium) 10 - 49.9 | 46 | 17 |
| (Large) 50 and over | 15 | 13 |
| Total or average | 76 | 17 |

Regional Basis

On a regional basis, the average daily production of producers shipping milk to Federal order markets ranged from more than 1,000 pounds in the Mountain States to less than 600 pounds in the East South Central and Middle Atlantic areas (appendix table 6). The 11 markets in these 2 latter regions were more alike -- based on average daily production -- than markets located in any of the other geographical areas. On the same basis, Federal order markets in the South Atlantic States showed the greatest variation, with average daily milk shipments of producers ranging from 380 pounds in one market to 12,487 pounds in another.

Methods of Shipping

As of November 1960, over half of the cooperatives included both can

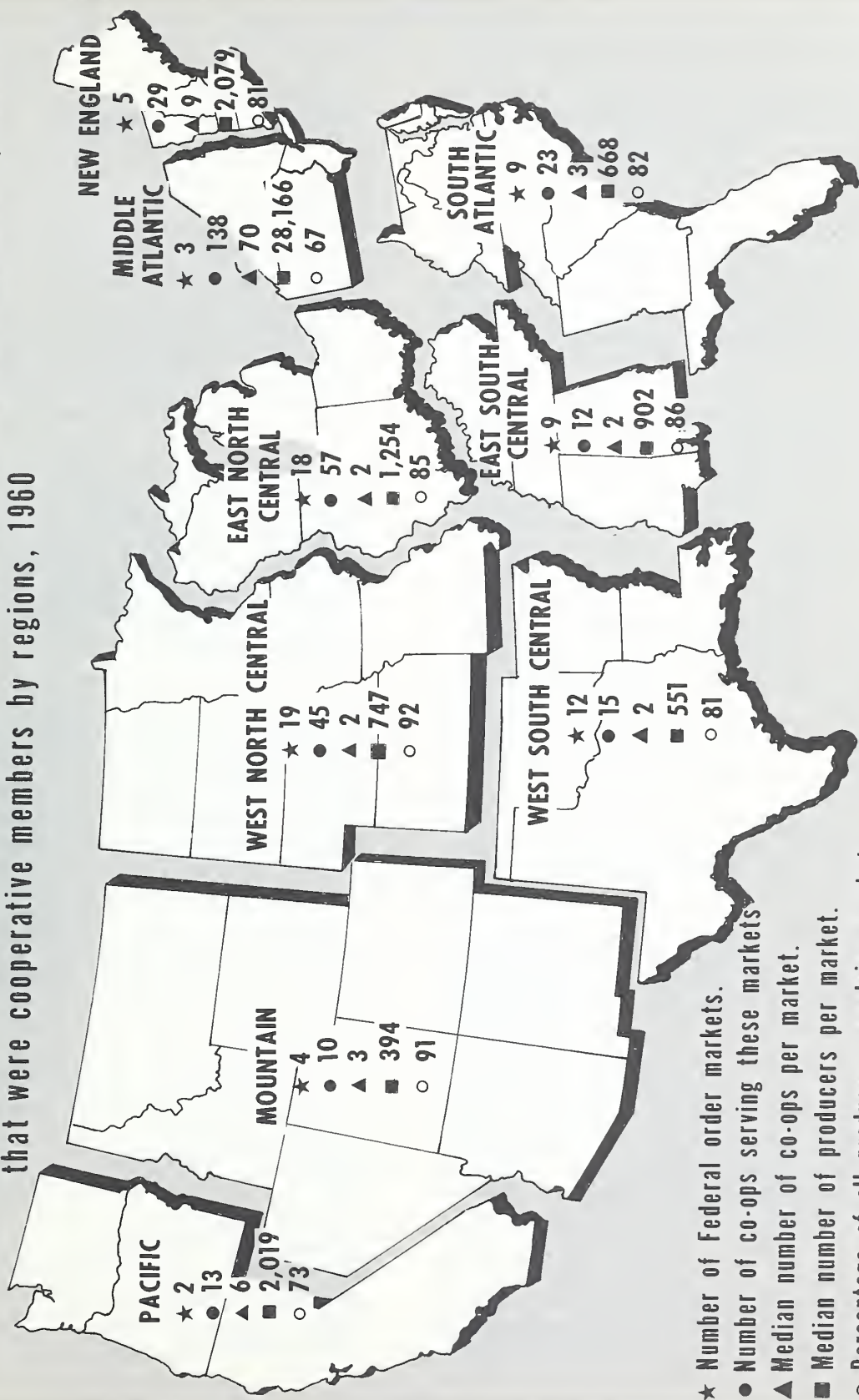
and bulk shippers (appendix table 7). Only 1 cooperative in 10 still had members composed entirely of can shippers, whereas more than one-third of the associations had gone entirely to bulk. Indications point to an increasing number of cooperatives with bulk shippers only.

From available data for 79 Federal order markets as of November 1960, more than 80 percent of the milk sold in these markets came from cooperative members. Appendix table 8 reveals that slightly less than one-fifth of this milk was shipped in cans. The New York-New Jersey market is excluded from appendix tables 7, 8, and 9, because of incomplete data.

Nonmembers shipped less than 20 percent of the milk sold in these 79 markets; and according to appendix table 9, almost a third of it was can milk. Thus cooperative members, on the average, had converted to bulk handling methods more rapidly than nonmembers.

Both members and nonmembers shipped the highest percentage of can milk to Federal order markets in the New England and Middle Atlantic regions. The smallest percentage of can milk came to markets in the Mountain and Pacific areas.

Figure 2. Number of Federal order markets and dairy cooperatives serving them, median number of cooperatives and producers per market, and percentage of producers that were cooperative members by regions, 1960



- ★ Number of Federal order markets.
- Number of co-ops serving these markets
- ▲ Median number of co-ops per market.
- Median number of producers per market.
- Percentage of all producers supplying markets that were cooperative members.

Findings

It is reasonable to infer from the study that dairy cooperatives played a key part in the marketing program of Federal order milk pools. In comparison to non-members or independent producers, farmer-members of marketing cooperatives far outnumbered non-members. They also -- through their cooperatives -- marketed the major proportion of milk shipped to order markets by performing several vital receiving, processing, transporting, diverting, manufacturing and bargaining functions.

To summarize, significant findings follow.

Number and Size

An average of 342 dairy cooperatives were serving 151,000 member-producers in Federal order markets during 4 selected months in 1960.

Most of these cooperatives operated in only one order market. An average of 38 organizations had multiover operations, with more than half of these in two markets. Twelve cooperatives were marketing milk in three or four Federal order markets. Three associations operated in five markets, and one had expanded its activities to include six order markets. Such multi-market operations, according to several dairy marketing experts, may be expected to increase rapidly in the 1960's.

Excluding the large New York-New Jersey market with its 133 associations, cooperatives ranged in number from 1 to 23 in the individual

markets, for a median of two associations to each market.

The majority of cooperatives serving Federal order markets were not large. Seventy-five percent of all associations operating in Federal order markets had less than 300 members serving these markets. Fourteen percent showed between 300 and 900 members, while only 11 percent listed 900 or more members serving order markets.

These data give an overall description of their size of operations. However, manufacturing grade operations of some cooperatives -- mainly in the North Central Region -- would cause these percentages to vary a little.

In the New York-New Jersey market, especially, there were approximately 125 small bargaining-type organizations, with most of these belonging to one or the other of two federations of cooperatives. In addition to these two federations of cooperatives, there were two large nonfederation member associations. Together these made up the "four qualified cooperatives" in the New York-New Jersey order.

Marketing Functions

Dairy cooperatives marketed almost four-fifths of all milk sold in Federal order markets during 1960. Of the 45 billion pounds of milk sold in these markets, cooperatives accounted for 35 billion pounds. They served as order handlers for more than 40 percent of this 35 billion pounds, and as bargaining agents for nearly 60 percent.

Order handling by cooperatives indicated increased activity in ownership and operation of plant and transportation facilities for marketing milk. Such handling has, in many instances, enhanced the bargaining position of these associations.

The percentage of milk marketed by cooperatives as order handlers differed widely among individual markets, running the gamut from none in nine markets to nearly 100 percent in the Minneapolis-St. Paul Federal Order. The median for all markets was about 20 percent.

Although the proportion of milk that cooperatives were the order handlers for varied from market to market, this study did find a direct relationship between the percentage of milk they handled and size of Federal order market. Cooperatives usually handled a larger proportion of milk in big markets.

In the smallest markets (under 5 million pounds monthly volume), cooperatives as order handlers marketed an average of 9 percent of the milk, compared with 18 percent in the 5 through 24.9 million pound class, 20 percent in the 25 through 74.9 million pound class, and 39 percent in the largest class of markets - 75 million pounds and over.

The study pointed up two major reasons for this relationship between size of market and percentage of milk handled by cooperatives: (1) Proportion of reserve milk in market, and (2) average distance of producers from market.

Milk reserve and market size were likewise directly related with smaller markets having a smaller percentage of reserve milk on the average than larger markets. The

proportion of reserve milk was a median 33 percent in the largest markets, compared to 27 percent in the next to largest, 23 percent in the next to smallest, and 19 percent in the smallest markets.

Since handling reserve was an important marketing function of dairy cooperatives, it naturally follows that they would handle a greater percentage of milk in larger markets containing proportionately more reserve.

Moreover, average distance of producers from market was usually greater in larger markets, and this necessitated receipt of a larger volume of milk at country receiving stations. The active role of cooperatives in operation of supply plants and movement of members' milk contributed greatly to their handling of a larger percentage of milk in bigger markets.

This study indicated that slightly more than half of all dairy cooperatives operating in Federal order markets became order handlers for either a fractional part or all of the milk they marketed there.

As order handlers, dairy cooperatives performed one or more of five types of important marketing functions:

1. Receiving milk directly from producers at regulated supply plants;
2. Receiving milk directly from producers at regulated distribution plants;
3. Receiving milk directly from producers at regulated supply-equalization plants;

4. Diverting milk directly from producers to unregulated or other regulated plants;

5. Transporting bulk tank milk directly from farms to regulated plants.

Cooperative supply plants -- those qualified by meeting certain shipping requirements -- received at least 50 percent of the 15 billion pounds of milk handled by these associations in 1960, making this operation the most significant marketing function engaged in by dairy cooperatives serving as order handlers. Such supply plants existed in about half of the 80 Federal order markets. Besides serving as receiving stations, these plants often contained facilities for manufacturing surplus milk. This was especially true of those supply plants

serving order markets in the North Central regions.

Cooperative distribution plants -- those qualified by meeting certain distributing requirements -- appeared in almost as many markets as the supply plants, but were fewer in number, processing 15 percent of the milk handled by cooperatives.

Cooperative supply-equalization plants -- those qualified by the association's meeting certain marketing requirements -- received 14 percent of the milk handled by cooperatives. These cooperatively-owned plants were marketing surplus or reserve milk not needed for Class I uses in 25 markets.

Cooperative diversion of milk directly from producers to unregulated and regulated manufacturing



Producers Creamery Company was the handler under the St. Louis Federal milk marketing order for the bulk milk shown above being received at its supply plant in Cabool, Mo. This milk was reloaded into an over-the-road tanker and hauled to bottling plants in the St. Louis market.

plants (in some markets diversion to regulated plants was permitted) made up 13 percent of the milk cooperatives handled. Cooperatives performed this function in more than half of all markets. Associations not operating their own manufacturing facilities usually employed this method of marketing milk not wanted by Class I buyers.

And finally, cooperative hauling of bulk milk received directly from producers in tank trucks and delivered to regulated distributing plants represented 8 percent of all milk handled by these cooperatives. Although this function accounted for a relatively small proportion of total milk handled by cooperatives in 1960, its importance should increase greatly within 5 to 7 years as additional supply plants are bypassed and most markets approach 100 percent in bulk milk deliveries.

Cooperatives helped to soften dislocations caused by rapid change-over to bulk milk handling. By 1960, more than 70 percent of the milk shipped to Federal order markets in all regions -- except the New England and Middle Atlantic -- was bulk tank milk.

As some distributors began refusing can milk shipments, cooperatives in many instances provided the only available market to these producers. Because of the low-volume, high-cost relationship involved in operating such can-receiving intakes, however, several cooperatives have set deadlines after which they, too, will handle only bulk shipments.

Milk handled by cooperatives in Federal order markets contained a higher proportion of can shipments than total milk shipped to these

markets. In the New England area, for example, can shipments accounted for more than 60 percent of the milk handled by cooperatives compared with about 40 percent of all milk shipped to markets in this area.

Membership in the majority of cooperatives included both can and bulk shippers. A third of the cooperatives had all members shipping bulk milk, while 1 in 10 associations still had members composed entirely of can shippers. All indications point to an increasing number of these cooperatives having only bulk shippers serving Federal order markets.

Members and Nonmembers

As implied by the volume of milk marketed by dairy cooperatives under Federal orders in 1960, these farmer-owned organizations represented nearly 80 percent of all producers shipping milk to these regulated marketing areas. The other 20 percent were nonmembers or independent shippers.

Individual markets ranged from those with less than half the producers belonging to cooperatives in one market to 100 percent in four markets. The median for all markets was 88 percent. Almost two of every three markets had producers, from 80 to 99 percent of whom belonged to dairy cooperatives.

The survey showed a slight inverse relationship between percentage of cooperative members and market size. Small markets (less than 1,000 producers) averaged 86 percent cooperative members, compared to medium (1,000-2,999) and large (3,000 and over) markets which

averaged 85 and 76 percent, respectively.

Judging by average daily milk shipments to all markets, members of dairy cooperatives had smaller dairy enterprises than independent shippers. All but 4 of the 80 markets received milk from both cooperative members and independent producers. In two-thirds of these duo-served markets, nonmembers averaged 18 percent larger daily milk shipments than members. In the remaining one-third of the markets members of cooperatives

shipped 15 percent more milk than nonmembers, on the average.

As the size of the market increased, differences in average daily milk output between member producers and nonmember producers diminished. Thus, in the large markets (monthly receipts of 50 million pounds and over) average daily milk shipments from members and nonmembers differed only 13 percent in volume, as compared with 17 percent in the medium markets (10-49.9 million pounds), and 24 percent in the small markets (less than 10 million pounds).

Appendix

Appendix table 1. — *Federal order markets classified by size of marketing area: Range and median number of dairy cooperatives per market, November 1960*

| Population per marketing area ¹ | Number of markets | Number of dairy cooperatives per market | | |
|--|-------------------|---|--------------------|-------------------|
| | | Lowest per market | Highest per market | Median per market |
| <u>Thousands</u> | | | | |
| Small | | | | |
| Less than 100 | 6 | 1 | 4 | 1 |
| Medium | | | | |
| 100 – 399 | 24 | 1 | 5 | 2 |
| 400 – 699 | 23 | 1 | 8 | 2 |
| 700 – 999 | 9 | 1 | 8 | 3 |
| Large | | | | |
| 1,000 – 1,999 | 9 | 2 | 10 | 5 |
| 2,000 – 2,999 | 6 | 3 | 18 | 8 |
| 3,000 and over | 3 | 10 | 133 | 22 |
| All markets | <u>80</u> | <u>1</u> | <u>133</u> | <u>2</u> |

¹ According to 1960 United States Census.

Appendix Table 2. — *Regional characteristics of cooperatives operating in more than one Federal order market, November 1960*

| Cooperatives | Number of cooperatives |
|--|------------------------|
| Operating only in intraregional markets: | 29 |
| Operating in some interregional markets: | |
| East North Central-East South Central | 1 |
| East North Central-West North Central | 3 |
| West North Central-West South Central | 4 |
| East South Central-South Atlantic | 1 |
| New England-Middle Atlantic | 2 |
| Middle Atlantic-South Atlantic | 1 |
| Total | 12 |
| Total—All cooperatives | 41 |

Appendix table 3. — *Percentage of member and nonmember milk in Federal Order markets reported by cooperative and proprietary order handlers, by region and by market, average of 4 selected months, 1960*

| Region and market | Total milk in pool | Percent of total milk reported by — | | | | | |
|--------------------------|--------------------|-------------------------------------|-----------|-------|----------------------------|-----------|-------|
| | | Cooperative order handlers | | | Proprietary order handlers | | |
| | | Member | Nonmember | Total | Member | Nonmember | Total |
| | <u>Mil. lbs.</u> | <u>Percent</u> | | | <u>Percent</u> | | |
| New England | 327 | 28 | 1 | 28 | 52 | 20 | 72 |
| Boston | 161 | 45 | 0 | 45 | 32 | 23 | 55 |
| Connecticut | 84 | 14 | 1 | 14 | 71 | 15 | 86 |
| Springfield | 17 | 9 | 0 | 9 | 73 | 18 | 91 |
| Worcester | 15 | 6 | 0 | 6 | 70 | 24 | 94 |
| Southeastern New England | 50 | 11 | 0 | 11 | 75 | 14 | 89 |
| Middle Atlantic | 1,020 | 31 | 1 | 31 | 35 | 34 | 69 |
| New York-New Jersey | 881 | 33 | —1 | 33 | 33 | 34 | 67 |
| Philadelphia | 139 | 16 | 0 | 16 | 47 | 37 | 84 |
| South Atlantic | 233 | 21 | 1 | 22 | 64 | 14 | 78 |
| Wilmington | 5 | 0 | 0 | 0 | 54 | 46 | 100 |
| Upper Chesapeake Bay | 53 | 14 | 0 | 14 | 60 | 26 | 86 |
| Wheeling | 14 | 8 | 0 | 8 | 60 | 32 | 92 |
| Washington, D. C. | 77 | 39 | 2 | 41 | 55 | 4 | 59 |
| Clarksburg | 6 | 9 | 1 | 10 | 54 | 36 | 90 |
| Tri-State | 21 | 8 | 0 | 8 | 77 | 15 | 92 |
| Bluefield | 4 | 0 | 0 | 0 | 86 | 14 | 100 |
| Appalachian | 14 | 25 | 0 | 25 | 72 | 3 | 75 |
| Southeastern Florida | 39 | 16 | 1 | 16 | 77 | 7 | 84 |
| East North Central | 1,158 | 35 | 1 | 35 | 49 | 16 | 65 |
| Muskegan | 8 | 4 | 0 | 4 | 88 | 8 | 96 |
| Upstate Michigan | 5 | 21 | 0 | 21 | 63 | 16 | 79 |
| Southern Michigan | 254 | 54 | 0 | 54 | 35 | 11 | 46 |
| Toledo | 26 | 0 | 0 | 0 | 94 | 6 | 100 |
| Northeastern Ohio | 133 | 20 | 0 | 20 | 47 | 33 | 80 |
| North Central Ohio | 20 | 0 | 0 | 0 | 81 | 19 | 100 |
| Columbus | 28 | 0 | 0 | 0 | 81 | 19 | 100 |

(Footnotes at end of table)

— Continued

Appendix table 3. — *Percentage of member and nonmember milk in Federal Order markets reported by cooperative and proprietary order handlers, by region and by market, average of 4 selected months, 1960*

| Region and market | Total milk in pool | Percent of total milk reported by — | | | | | |
|---------------------------------|--------------------|-------------------------------------|-----------|----------------------------|---------|-----------|-------|
| | | Cooperative order handlers | | Proprietary order handlers | | | |
| | | Member | Nonmember | Total | Member | Nonmember | Total |
| | Mil. lbs. | Percent | | | Percent | | |
| East North Central (Cont'd.) | | | | | | | |
| Dayton-Springfield | 36 | 39 | 7 | 46 | 38 | 16 | 54 |
| Cincinnati | 47 | 19 | 0 | 19 | 71 | 10 | 81 |
| Michigan Upper Peninsula | 11 | 35 | 0 | 35 | 47 | 18 | 65 |
| Northeastern Wisconsin | 31 | 29 | 0 | 29 | 65 | 6 | 71 |
| Milwaukee | 47 | 25 | 0 | 25 | 71 | 4 | 75 |
| Rockford-Freeport | 5 | 9 | 0 | 9 | 85 | 6 | 91 |
| South Bend-LaPorte-Elkhart | 23 | 13 | 0 | 13 | 50 | 37 | 87 |
| Fort Wayne | 9 | 63 | 0 | 63 | 36 | 1 | 37 |
| Chicago | 438 | 38 | 1 | 39 | 45 | 16 | 61 |
| Ohio Valley | 15 | 9 | 0 | 9 | 84 | 7 | 91 |
| Suburban St. Louis ² | 22 | 24 | 0 | 24 | 66 | 10 | 76 |
| | | | | | | | |
| West North Central | 397 | 49 | 1 | 49 | 44 | 7 | 51 |
| Duluth-Superior | 14 | 73 | 0 | 73 | 0 | 27 | 27 |
| Minneapolis-St. Paul | 78 | 99 | 0 | 99 | 0 | 1 | 1 |
| Eastern South Dakota | 3 | 10 | 0 | 10 | 90 | | 90 |
| Sioux Falls-Mitchell | 8 | 13 | 0 | 13 | 87 | 0 | 87 |
| Black Hills | 4 | 13 | 0 | 13 | 87 | 0 | 87 |
| North Central Iowa | 22 | 20 | 0 | 20 | 59 | 21 | 80 |
| Dubuque | 4 | 22 | 0 | 22 | 26 | 52 | 78 |
| Cedar Rapids-Iowa City | 15 | 20 | 0 | 20 | 73 | 7 | 80 |
| Quad Cities | 16 | 29 | 0 | 29 | 68 | 3 | 71 |
| Des Moines | 21 | 22 | 0 | 22 | 68 | 10 | 78 |
| Sioux City | 5 | 9 | 0 | 9 | 91 | 0 | 91 |
| Omaha-Lincoln-Council Bluffs | 26 | 4 | 0 | 4 | 94 | 2 | 96 |
| Platte Valley | 8 | 30 | 0 | 30 | 67 | 3 | 70 |
| St. Louis | 61 | 27 | 1 | 27 | 70 | 3 | 73 |
| Ozarks | 16 | 78 | 0 | 78 | 18 | 4 | 22 |

(See footnotes at end of table)

— Continued

Appendix table 3. — *Percentage of member and nonmember milk in Federal Order markets reported by cooperative and proprietary order handlers, by region and by market, average of 4 selected months, 1960*

| Region and market | Total milk in pool | Percentage of total milk reported by — | | | | | |
|-----------------------------|--------------------|--|-----------|-------|----------------------------|-----------|-------|
| | | Cooperative order handler | | | Proprietary order handlers | | |
| | | Member | Nonmember | Total | Member | Nonmember | Total |
| | Mil. lbs. | Percent | | | Percent | | |
| West North Central (Con'd.) | | | | | | | |
| Kansas City | 57 | 63 | 1 | 64 | 26 | 10 | 36 |
| Neosho Valley | 12 | 28 | 0 | 28 | 48 | 24 | 72 |
| Wichita | 22 | 46 | 0 | 46 | 50 | 4 | 54 |
| Southwest Kansas | 5 | 64 | 0 | 64 | 18 | 18 | 36 |
| | | | | | | | |
| East South Central | 142 | 14 | — | 14 | 72 | 14 | 86 |
| Louisville-Lexington | 40 | 2 | — | 2 | 90 | 8 | 98 |
| Paducah | 6 | 3 | 0 | 3 | 89 | 8 | 97 |
| Nashville | 21 | 12 | 0 | 12 | 78 | 10 | 88 |
| Memphis | 18 | 50 | 2 | 52 | 42 | 6 | 48 |
| Knoxville | 15 | 0 | 0 | 0 | 80 | 20 | 100 |
| Chattanooga | 13 | 18 | 0 | 18 | 51 | 31 | 82 |
| Mississippi Delta | 8 | 37 | 1 | 37 | 29 | 34 | 63 |
| Central Mississippi | 16 | 13 | 1 | 13 | 73 | 14 | 87 |
| Mississippi Gulf Coast | 5 | 5 | 0 | 5 | 85 | 10 | 95 |
| | | | | | | | |
| West South Central | 273 | 27 | 0 | 27 | 55 | 18 | 73 |
| Central Arkansas | 17 | 1 | 0 | 1 | 98 | 2 | 100 |
| Fort Smith | 4 | 0 | 0 | 0 | 100 | 0 | 100 |
| Oklahoma Metropolitan | 46 | 67 | 0 | 67 | 3 | 30 | 33 |
| Red River Valley | 14 | 5 | 0 | 5 | 62 | 33 | 95 |
| Texas Panhandle | 13 | 10 | 0 | 10 | 82 | 8 | 90 |
| Northern Louisiana | 13 | 5 | 0 | 5 | 72 | 23 | 95 |
| New Orleans | 32 | 41 | 0 | 41 | 18 | 41 | 59 |
| North Texas | 75 | 23 | 0 | 23 | 70 | 7 | 77 |
| Central West Texas | 15 | 15 | 0 | 15 | 85 | 1 | 85 |
| Austin-Waco | 10 | 18 | 0 | 18 | 78 | 4 | 82 |
| San Antonio | 21 | 22 | 0 | 22 | 66 | 12 | 78 |
| Corpus Christi | 13 | 0 | 0 | 0 | 60 | 40 | 100 |

(See footnotes at end of table)

— Continued

Appendix table 3. — *Percentage of member and nonmember milk in Federal Order markets reported by cooperative and proprietary order handlers, by region and by market, average of 4 selected months, 1960*

| Region and market | Total milk in pool | Percent of total milk reported by — | | | | | |
|----------------------------|--------------------|-------------------------------------|-----------|-------|----------------------------|-----------|---------|
| | | Cooperative order handlers | | | Proprietary order handlers | | |
| | | Member | Nonmember | Total | Member | Nonmember | Total |
| | Mil. lbs. | | Percent | | | | Percent |
| Mountain | 81 | 44 | 2 | 46 | 42 | 12 | 54 |
| Great Basin | 33 | 80 | 6 | 86 | 6 | 8 | 14 |
| Western Colorado | 3 | 0 | 0 | 0 | 83 | 17 | 100 |
| Colorado Springs-Pueblo | 10 | 21 | 0 | 21 | 54 | 25 | 79 |
| Central Arizona | 35 | 20 | 0 | 20 | 69 | 11 | 80 |
| Pacific | 104 | 40 | 1 | 41 | 30 | 29 | 59 |
| Puget Sound | 90 | 41 | 1 | 42 | 28 | 30 | 58 |
| Inland Empire | 14 | 33 | 1 | 34 | 42 | 24 | 66 |
| United States (80 markets) | 3,735 | 33 | 1 | 33 | 46 | 21 | 67 |

¹ Less than 0.5 percent.

² The Suburban St. Louis Federal Order became effective June 1, 1960; a 2-month average was calculated for this one market.

Appendix table 4. — Cooperatives classified by number performing functions as handlers under Federal orders, those not performing such functions, and total, by regions and markets, average of 4 selected months, 1960

| Region and market | Number of cooperatives with functions performed as handlers | | | | | Number of cooperatives not handlers for milk 3 | Total number of cooperatives 3 |
|--------------------------|---|---------------------|---------------------|--|----------------------------|---|-----------------------------------|
| | Receiving milk directly from producers at regulated — | | Diverting milk 1 | Receiving and delivering bulk tank milk 2 | | | |
| | Supply plants | Distributing plants | | | | | |
| | | | | | Supply equalization plants | | |
| | | | | | | | |
| New England | 11 ⁴ | 8 ⁵ | 3 | 1 | 0 | 10 | 29 |
| Boston | 11 | 2 | 0 | 0 | 0 | 6 | 18 |
| Connecticut | 1 | 3 | 1 | 1 | 0 | 3 | 9 |
| Springfield | 0 | 1 | 0 | 0 | 0 | 1 | 2 |
| Worcester | 1 | 1 | 0 | 0 | 0 | 2 | 3 |
| Southeastern New England | 2 | 2 | 2 | 0 | 0 | 4 | 10 |
| Middle Atlantic | 25 ⁶ | 4 | 4 | 4 | 0 | 104 | 138 |
| New York-New Jersey | 25 | 2 | 4 | 47 | 0 | 100 | 133 |
| Philadelphia | 1 | 2 | 0 | 0 | 0 | 5 | 8 |
| South Atlantic | 4 | 9 | 2 | 3 | 0 | 12 | 23 |
| Wilmington | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Upper Chesapeake Bay | 2 | 0 | 0 | 1 | 0 | 2 | 3 |
| Wheeling | 0 | 2 | 0 | 0 | 0 | 1 | 3 |
| Washington, D. C. | 1 | 2 | 1 | 0 | 0 | 2 | 5 |
| Clarksburg | 0 | 2 | 0 | 0 | 0 | 1 | 3 |
| Tri-State | 1 | 1 | 0 | 1 | 0 | 6 | 8 |
| Bluefield | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Appalachian | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Southeastern Florida | 0 | 2 | 0 | 1 | 0 | 1 | 3 |
| East North Central | 26 ⁸ | 17 ⁹ | 11 | 91 ⁰ | 2 | 16 | 57 |
| Muskegan | 0 | 0 | 0 | 1 | 0 | 1 | 2 |

(See footnotes at end of table)

— Continued

Appendix table 4 (cont'd.) — Cooperatives classified by number performing functions as handlers under Federal orders, those not performing such functions, and total, by regions and markets, average of 4 selected months, 1960

| Region and market | Number of cooperatives with functions performed as handlers | | | | | Number of cooperatives not handlers for milk 3 | Total number of cooperatives 3 |
|------------------------------|---|---------------------|----------------------------|---------------------|--|---|-----------------------------------|
| | Receiving milk directly from producers at regulated — | | | Diverting milk 1 | Receiving and delivering bulk tank milk 2 | | |
| | Supply plants | Distributing plants | Supply equalization plants | | | | |
| | Number | | | | | | |
| East North Central (cont'd.) | | | | | | | |
| Upstate Michigan | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Southern Michigan | 6 | 5 | 9 | 2 | 0 | 2 | 10 |
| Toledo | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Northeastern Ohio | 2 | 1 | 1 | 0 | 2 | 4 | 8 |
| North Central Ohio | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Columbus | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Dayton-Springfield | 0 | 0 | 1 | 0 | 1 | 0 | 1 |
| Cincinnati | 0 | 1 | 0 | 0 | 0 | 1 | 2 |
| Michigan Upper Peninsula | 1 | 4 | 0 | 0 | 0 | 1 | 5 |
| Northeastern Wisconsin | 1 | 4 | 0 | 0 | 1 | 3 | 7 |
| Milwaukee | 0 | 1 | 0 | 0 | 0 | 4 | 5 |
| Rockford-Freeport | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| South Bend-LaPorte-Elkhart | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Fort Wayne | 0 | 2 | 0 | 0 | 2 | 0 | 2 |
| Chicago | 18 | 1 | 0 | 0 | 0 | 6 | 23 |
| Ohio Valley | 1 | 0 | 0 | 0 | 1 | 1 | 3 |
| Suburban St. Louis | 2 | 1 | 0 | 0 | 1 | 4 | 5 |
| | | | | | | <u>10</u> | <u>45</u> |
| West North Central | <u>17 12</u> | <u>11</u> | <u>10 11</u> | <u>6 14</u> | <u>16 13</u> | <u>2</u> | <u>2</u> |
| Duluth-Superior | 1 | 1 | 0 | 2 | 1 | 0 | 8 |
| Minneapolis-St. Paul | 6 | 3 | 0 | 0 | 1 | 0 | 4 |
| Eastern South Dakota | 0 | 0 | 0 | 0 | 3 | 1 | 2 |
| Sioux Falls-Mitchell | 0 | 0 | 1 | 0 | 2 | 0 | 2 |

(See footnotes at end of table)

— Continued

Appendix table 4 (cont'd.) — Cooperatives classified by number performing functions as handlers under Federal orders, those not performing such functions, and total, by regions and markets, average of 4 selected months, 1960

| Region and market | Number of cooperatives with functions performed as handlers | | | | | Number of cooperatives not handlers for milk ³ | Total number of cooperatives ³ |
|------------------------------|---|---------------------|-----------------------------|--|----------------------------|---|---|
| | Receiving milk directly from producers at regulated — | | Diverting milk ¹ | Receiving and delivering bulk tank milk ² | | | |
| | Supply plants | Distributing plants | | | | | |
| | | | | | Supply equalization plants | | |
| <u>Number</u> | | | | | | | |
| West North Central (cont'd.) | | | | | | | |
| Black Hills | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| North Central Iowa | 1 | 3 | 0 | 0 | 0 | 4 | 8 |
| Dubuque | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Cedar Rapids-Iowa City | 0 | 0 | 1 | 1 | 0 | 1 | 2 |
| Quad Cities | 1 | 1 | 1 | 0 | 0 | 1 | 2 |
| Des Moines | 1 | 0 | 1 | 1 | 0 | 0 | 1 |
| Sioux City | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Omaha-Lincoln-C. Bluffs | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Platte Valley | 1 | 0 | 0 | 1 | 0 | 0 | 1 |
| St. Louis | 3 | 0 | 2 | 1 | 0 | 1 | 5 |
| Ozarks | 2 | 0 | 0 | 3 | 2 | 0 | 3 |
| Kansas City | 1 | 1 | 1 | 1 | 2 | 2 | 6 |
| Neosho Valley | 1 | 1 | 0 | 0 | 0 | 2 | 3 |
| Wichita | 0 | 1 | 1 | 2 | 0 | 0 | 2 |
| Southwest Kansas | 0 | 0 | 1 | 0 | 1 | 0 | 1 |
| | <u>3</u> | <u>1</u> | <u>3</u> | <u>6</u> | <u>15</u> | <u>5</u> | <u>12</u> |
| East South Central | | | | | | | |
| Louisville-Lexington | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Paducah | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Nashville | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Memphis | 1 | 0 | 0 | 0 | 1 | 1 | 2 |
| Knoxville | 0 | 0 | 0 | 0 | 0 | 2 | 2 |

(See footnotes at end of table)

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Appendix table 4 (cont'd.)—Cooperatives classified by number performing functions as handlers under Federal orders, those not performing such functions, and total, by regions and markets, average of 4 selected months, 1960

| Region and market | Number of cooperatives with functions performed as handlers | | | | | Number of cooperatives not handlers for milk ³ | Total number of cooperatives ³ |
|------------------------------|---|---------------------|----------------------------|-----------------------------|--|---|---|
| | Receiving milk directly from producers at regulated — | | | Diverting milk ¹ | Receiving and delivering bulk tank milk ² | | |
| | Supply plants | Distributing plants | Supply equalization plants | | | | |
| | | | | | | | |
| Number | | | | | | | |
| East South Central (cont'd.) | | | | | | | |
| Chattanooga | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Mississippi Delta | 1 | 1 | 0 | 0 | 2 | 0 | 4 |
| Central Mississippi | 1 | 0 | 0 | 0 | 2 | 0 | 3 |
| Mississippi Gulf Coast | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| | <u>2</u> | <u>5</u> | <u>4</u> | <u>4</u> | <u>6</u> | <u>4</u> | <u>15</u> |
| West South Central | 16 | 0 | 0 | 0 | 17 | 0 | 1 |
| Central Arkansas | 0 | 0 | 0 | 0 | 18 | 0 | 1 |
| Fort Smith | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Oklahoma Metropolitan | 0 | 2 | 0 | 0 | 2 | 2 | 3 |
| Red River Valley | 0 | 1 | 0 | 0 | 2 | 0 | 3 |
| Texas Panhandle | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| Northern Louisiana | 18 | 0 | 0 | 0 | 0 | 0 | 1 |
| New Orleans | 1 | 0 | 0 | 0 | 1 | 2 | 1 |
| North Texas | 1 | 1 | 1 | 1 | 1 | 0 | 3 |
| Central West Texas | 0 | 0 | 1 | 2 | 2 | 0 | 2 |
| Austin-Waco | 1 | 0 | 1 | 0 | 0 | 0 | 2 |
| San Antonio | 1 | 1 | 1 | 0 | 0 | 0 | 2 |
| Corpus Christie | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | <u>1</u> | <u>3</u> | <u>0</u> | <u>6</u> | <u>3</u> | <u>4</u> | <u>10</u> |
| Mountain | 0 | 2 | 0 | 0 | 3 | 3 | 4 |
| Great Basin | | | | | | | |
| Western Colorado | 0 | 0 | 0 | 0 | 0 | 1 | 1 |

(See footnotes at end of table)

— Continued

| Region and market | Number of cooperatives with functions performed as handlers | | | | | Number of cooperatives not handlers for milk 3 | Total number of cooperatives 3 |
|----------------------------|---|---------------------|----------------------------|---------------------|--|---|-----------------------------------|
| | Receiving milk directly from producers at regulated — | | | Diverting milk 1 | Receiving and delivering bulk tank milk 2 | | |
| | Supply plants | Distributing plants | Supply equalization plants | | | | |
| | <u>Number</u> | | | | | | |
| Mountain (cont'd.) | | | | | | | |
| Colorado Springs-Pueblo | 1 | 0 | 0 | 1 | 1 | 2 | 5 |
| Central Arizona | 0 | 1 | 0 | 2 | 0 | 0 | 2 |
| Pacific | 4 | 8 | 0 | 4 | 0 | 2 | 13 |
| Puget Sound | 4 | 6 | 0 | 4 | 0 | 1 | 10 |
| Inland Empire | 0 | 2 | 0 | 0 | 0 | 1 | 3 |
| United States (80 markets) | 94 | 66 | 37 | 55 | 17 | 166 | 342 |

¹ Diversing milk directly from producers to nonregulated plant(s) or to regulated plant(s).

² Receiving bulk milk directly from producers in tank trucks and delivering it to regulated plant(s).

³ Number of cooperatives for a region is less than total member operating in all Federal order markets within a region (with exception of Pacific area) due to multimarket operations of many associations.

⁴ One co-op had plants in two markets; another co-op had plants in three markets whose headquarters was in an adjacent region.

⁵ One co-op had plants in two markets.

⁶ One co-op had plants in both markets.

⁷ Co-ops in the New York-New Jersey market that caused milk to be delivered for their account to pool plant(s) are listed here.

⁸ One co-op had plants in two markets; another co-op had two plants in one market whose headquarters was in an adjoining region.

⁹ Two co-ops had plants in two markets; another plant belonged to co-op in an adjacent area.

¹⁰ One co-op diverted milk in two markets; one co-op diversing milk had headquarters in adjoining region.

¹¹ One co-op plant belonged to association in another region.

¹² One co-op had plants in two markets.

¹³ Two co-ops were diversing milk in two markets each; another co-op diversing milk had headquarters in adjacent region.

¹⁴ One co-op performing this function had headquarters in another area.

¹⁵ One co-op was diversing in two markets.

¹⁶ One co-op with plants in two markets had headquarters in adjacent region.

¹⁷ One co-op diverted in four markets; another in two markets.

¹⁸ Less than 0.5.

Appendix table 5. — *Percentage of bulk and can milk handled by cooperatives compared to total bulk and can milk pooled in Federal order markets, by regions, average of 4 selected months, 1960*

| Region and method of shipment | Total milk | | | |
|-------------------------------|-------------------------|----------------|-------------------|----------------|
| | Handled by cooperatives | | Pooled in markets | |
| | <u>Mil. lbs.</u> | <u>Percent</u> | <u>Mil. lbs.</u> | <u>Percent</u> |
| New England | | | | |
| Bulk milk | 35 | 38 | 210 | 64 |
| Can milk | 57 | 62 | 117 | 36 |
| Total | 92 | 100 | 327 | 100 |
| Middle Atlantic | | | | |
| Bulk milk | 72 | 23 | 253 | 25 |
| Can milk | 242 | 77 | 767 | 75 |
| Total | 314 | 100 | 1,020 | 100 |
| South Atlantic | | | | |
| Bulk milk | 44 | 85 | 196 | 84 |
| Can milk | 8 | 15 | 37 | 16 |
| Total | 52 | 100 | 233 | 100 |
| East North Central | | | | |
| Bulk milk | 289 | 72 | 834 | 72 |
| Can milk | 113 | 28 | 324 | 28 |
| Total | 402 | 100 | 1,158 | 100 |
| West North Central | | | | |
| Bulk milk | 154 | 80 | 327 | 82 |
| Can milk | 39 | 20 | 70 | 18 |
| Total | 193 | 100 | 397 | 100 |
| East South Central | | | | |
| Bulk milk | 13 | 64 | 109 | 77 |
| Can milk | 8 | 36 | 33 | 23 |
| Total | 21 | 100 | 142 | 100 |
| West South Central | | | | |
| Bulk milk | 53 | 73 | 224 | 82 |
| Can milk | 20 | 27 | 49 | 18 |
| Total | 73 | 100 | 273 | 100 |
| Mountain | | | | |
| Bulk milk | 36 | 96 | 78 | 96 |
| Can milk | 1 | 4 | 3 | 4 |
| Total | 37 | 100 | 81 | 100 |

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Appendix table 5 (cont'd) – *Percentage of bulk and can milk handled by cooperatives compared to total bulk and can milk pooled in Federal order markets, by regions, average of 4 selected months, 1960*

| Region and method of shipment | Total milk | | | |
|-------------------------------|-------------------------|----------------|-------------------|----------------|
| | Handled by cooperatives | | Pooled in markets | |
| | <u>Mil. lbs.</u> | <u>Percent</u> | <u>Mil. lbs.</u> | <u>Percent</u> |
| Pacific | | | | |
| Bulk milk | 42 | 97 | 102 | 98 |
| Can milk | 1 | 3 | 2 | 2 |
| Total | <u>43</u> | <u>100</u> | <u>104</u> | <u>100</u> |
| United States | | | | |
| Bulk milk | 738 | 60 | 2,333 | 62 |
| Can milk | 489 | 40 | 1,402 | 38 |
| Total (80 markets) | <u>1,227</u> | <u>100</u> | <u>3,735</u> | <u>100</u> |

Appendix table 6. — *Classification of Cooperative and nonmember producers supplying Federal order markets—by volume shipped per day and volume and percentage of monthly shipments, by regions, average of 4 selected months, 1960*

| Item | Regions | | | | |
|---------------------------------|--------------------|--------------------|-----------------------|--------------------|--------------------|
| | New England | Middle Atlantic | South Atlantic | East North Central | West North Central |
| | | | <u>Number</u> | | |
| Federal order markets | 5 | 2 | 9 | 18 | 19 |
| | | | <u>Pounds</u> | | |
| Volume per producer per day | | | | | |
| Co-op members | 622 | 584 | 872 | 618 | 677 |
| Nonmembers | 664 | 626 | 694 | 668 | 640 |
| All producers (average) | 630 | 598 | 839 | 626 | 674 |
| | | | <u>Million pounds</u> | | |
| Volume of monthly shipments | | | | | |
| Co-op members | 263 | 668 | 198 | 970 | 368 |
| Nonmembers | 64 | 352 | 35 | 188 | 29 |
| Total | 327 | 1,020 | 233 | 1,158 | 397 |
| | | | <u>Percent</u> | | |
| Percentage of monthly shipments | | | | | |
| Co-op members | 80 | 66 | 85 | 84 | 93 |
| Nonmembers | 20 | 34 | 15 | 16 | 7 |
| Total | 100 | 100 | 100 | 100 | 100 |
| Item | East South Central | West South Central | Mountain | Pacific | United States |
| | | | | | |
| | | | <u>Number</u> | | |
| Federal order markets | 9 | 12 | 4 | 2 | 80 |
| | | | <u>Pounds</u> | | |
| Volume per producer per day | | | | | |
| Co-op members | 567 | 771 | 1,110 | 812 | 647 |
| Nonmembers | 594 | 740 | 1,916 | 946 | 664 |
| All producers (average) | 571 | 766 | 1,181 | 848 | 651 |
| | | | <u>Million pounds</u> | | |
| Volume of monthly shipments | | | | | |
| Co-op members | 122 | 224 | 69 | 73 | 2,955 |
| Nonmembers | 20 | 49 | 12 | 31 | 780 |
| Total | 142 | 273 | 81 | 104 | 3,735 |
| | | | <u>Percent</u> | | |
| Percentage of monthly shipments | | | | | |
| Co-op members | 86 | 82 | 86 | 70 | 79 |
| Nonmembers | 14 | 18 | 14 | 30 | 21 |
| Total | 100 | 100 | 100 | 100 | 100 |

Appendix table 7. — *Cooperatives in Federal order markets classified by members' method of milk shipments, by regions, November 1960*

| Region | Number of cooperatives with members shipping — | | | | Percent of all cooperatives with members shipping — | | | |
|------------------------------|--|----------------|-------------------|------------------|---|----------------|-------------------|------------------|
| | Can milk only | Bulk milk only | Bulk and can milk | All cooperatives | Can milk only | Bulk milk only | Bulk and can milk | All cooperatives |
| New England | 3 | 6 | 32 | 41 | 7 | 15 | 78 | 100 |
| Middle Atlantic ¹ | 3 | 0 | 5 | 8 | 38 | 0 | 62 | 100 |
| South Atlantic | 6 | 12 | 13 | 31 | 19 | 39 | 42 | 100 |
| East North Central | 9 | 33 | 39 | 81 | 11 | 41 | 48 | 100 |
| West North Central | 4 | 28 | 24 | 56 | 7 | 50 | 43 | 100 |
| East South Central | 1 | 4 | 12 | 17 | 6 | 23 | 71 | 100 |
| West South Central | 2 | 7 | 14 | 23 | 9 | 30 | 61 | 100 |
| Mountain | 0 | 6 | 6 | 12 | 0 | 50 | 50 | 100 |
| Pacific | 0 | 4 | 8 | 12 | 0 | 33 | 67 | 100 |
| United States (79 markets) | 28 | 100 | 153 | 281 | 10 | 36 | 54 | 100 |

¹ Data were not available on cooperative members' bulk and can chipments in the New York-New Jersey market.

Appendix table 8. — *Proportion of milk supplied by cooperative members to Federal order markets that was bulk and can shipments, by regions, November 1960*

| Region | Volume of shipments | | Total member milk | Percent of total | |
|------------------------------|---------------------|----------|-------------------|------------------|----------|
| | Bulk milk | Can milk | | Bulk milk | Can milk |
| | <u>Mil. lbs.</u> | | | <u>Percent</u> | |
| New England | 177 | 76 | 253 | 70 | 30 |
| Middle Atlantic ¹ | 29 | 52 | 81 | 35 | 65 |
| South Atlantic | 170 | 22 | 192 | 88 | 12 |
| East North Central | 717 | 209 | 926 | 77 | 23 |
| West North Central | 304 | 43 | 347 | 88 | 12 |
| East South Central | 106 | 22 | 128 | 83 | 17 |
| West South Central | 201 | 25 | 226 | 89 | 11 |
| Mountain | 67 | 1 | 68 | 99 | 1 |
| Pacific | 69 | 1 | 70 | 99 | 1 |
| United States (79 markets) | 1,840 | 451 | 2,291 | 80 | 20 |

¹ Data were not available on cooperative members' bulk and can milk shipments in the New York-New Jersey market.

Appendix table 9. — *Proportion of milk supplies by nonmember producers to Federal order markets that was bulk and can shipments, by regions, November 1960*

| Region | Volume of shipments | | Total Nonmember milk | Percent of total | |
|------------------------------|---------------------|--------------|----------------------------|------------------|-------------|
| | Bulk milk | Can milk | | Bulk milk | Can milk |
| | | | <u>Mil. lbs.</u> | <u>Percent</u> | |
| New England | 32 | 24 | 56 | 57 | 43 |
| Middle Atlantic ¹ | 20 | 30 | 50 | 40 | 60 |
| South Atlantic | 26 | 6 | 32 | 81 | 19 |
| East North Central | 119 | 58 | 177 | 67 | 33 |
| West North Central | 18 | 9 | 27 | 67 | 33 |
| East South Central | 15 | 5 | 20 | 76 | 24 |
| West South Central | 37 | 10 | 47 | 79 | 21 |
| Mountain | 11 | ² | 11 | 96 | 4 |
| Pacific | 29 | 1 | 30 | 98 | 2 |
| United States (79 markets) | 307 | 143 | 450 | 68 | 32 |

¹Data were not available on nonmembers' bulk and can milk shipments in the New York-New Jersey market.

²Less than 0.5 million pounds.

Other Publications Available

Criteria for Evaluating Dairy Cooperatives, Bulletin 14. Stanley F. Krause.

Milk Receiving Costs during Shift from Can to Bulk, General Report 77.
James B. Roof.

How Manufacturing Co-ops Market Grade A Milk, Circular 26. Donald R.
Davidson.

Integrated Dairy Operations through Farmer Cooperatives, General Report
69. Anne L. Gessner.

Seasonal Milk Pricing Plans, Bulletin 12. Stanley F. Krause.

Pricing Milk according to Use, Bulletin 6. Stanley F. Krause.

Multiquart Containers—Their Effect on Milk Packaging and Handling Costs
in Selected Cooperatives. General Report 90. William J. Monroe.

Selecting a Program for Butterfat Sampling, Circular 11. Homer J.
Preston.

Grade A. Milk Marketing by Manufacturing Co-ops, General Report 56.
Donald R. Davidson.

Dairy Cooperatives Help Find Markets, Bulletin 1, Reprint 2. Donald E.
Hirsch.

Statistics of Farmer Cooperatives, 1960-61, General Report 112. Anne L.
Gessner.

Comparing Bulk and Can Milk Hauling Costs, Circular 14. Joseph M.
Cowden.

A copy of each of these publications may be obtained upon request while a
supply is available from—

Farmer Cooperative Service
U. S. Department of Agriculture
Washington 25, D. C.

